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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,975	02/02/2001	Hisako Koyanagi	FUJI 18.299	7264

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EXAMINER	
MOLINARI, MICHAEL J	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,975	KOYANAGI ET AL.	
	Examiner	Art Unit	
	Michael J Molinari	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3 and 4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Lines 13-14 of the claim contains the limitation "selecting one or the plurality of networks", but it appears that it should read "selecting one of the plurality of networks". Appropriate correction is required.

2. Claim 12 is objected to because of the following informalities: Line 9 of the claim contains the limitation "means for stet storing", which appears to be a typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitai et al. (U.S. Patent No. 5,948,069).

5. Referring to claim 1, Kitai et al. disclose a data transmission apparatus transmitting data received from a user terminal device (Client, see Figure 3, #301) through a plurality of networks (see column 6, lines 4-19) to a destination (Server, see Figure 3, #3000), said user terminal device executing communication using an Internet protocol (see column 6, lines 28-32), said data transmission apparatus comprising: a routing table (Routing Table, see Figure 1, #61a, #61b,

#61c) storing information relating to a destination address (see Figure 1, #180) of the data and address of the plurality of networks (see Figure 1, #70-#76); an information table (Network Information Table, see Figure 1, #73) storing static and dynamic information about the plurality of networks (See Figure 1, #80-#85, note that Name of LAN I/F is static and Number of Packets Received is dynamic); and a selection unit (Selector, see Abstract; see column 6, lines 20-21) selecting one or the plurality of networks, through which said data transmission apparatus transmits the data to the destination, based on said static and dynamic information (see Abstract; see column 7, lines 44-48; and see column 9, lines 6-33).

6. Referring to claim 2, Kitai et al. disclose that said information table stores the static and dynamic information about a plurality of service classes included in a network (see Figure 1, QoS Control Table), wherein said selection unit selects one or the plurality of service classes, through which said data transmission apparatus transmits the data to the destination, based on said static and dynamic information about the plurality of service classes (see Abstract; see column 7, lines 44-48; and see column 9, lines 6-33).

7. Referring to claim 3, Kitai et al. disclose that a part or all of the plurality of networks include a plurality of service classes (see column 6, lines 48-63), wherein said selection unit selects a service class included in a network, through which said data transmission apparatus transmits the data to the destination, based on the static and dynamic information about the plurality of networks and of the plurality of service classes (see Abstract; see column 7, lines 44-48; and see column 9, lines 6-33).

8. Referring to claim 10, Kitai et al. disclose a method of transmitting data from a user terminal device (Client, see Figure 3, #301) through a plurality of networks (see column 6, lines

4-19) to a destination (Server, see Figure 3, #3000), said user terminal device executing communication using an Internet protocol (see column 6, lines 28-32), said method comprising the steps of: storing information relating a destination address (see Figure 1, #180) of the data and addresses of the plurality of networks (see Figure 1, #70-#76) in a routing table (Routing Table, see Figure 1, #61a, #61b, #61c); storing static and dynamic information about the plurality of networks (See Figure 1, #80-#85, note that Name of LAN I/F is static and Number of Packets Received is dynamic) in an information table (Network Information Table, see Figure 1, #73); and selecting one or the plurality of networks, through which the data is transmitted to the destination, based on said static and dynamic information (see Abstract; see column 7, lines 44-48; and see column 9, lines 6-33).

9. Referring to claim 11, Kitai et al. disclose storing the static and dynamic information about a plurality of service classes included in a network, in said information table (see Figure 1, QoS Control Table); and selecting one or the plurality of service classes, through which the data is transmitted to the destination, based on said static and dynamic information about the plurality of service classes (see Abstract; see column 7, lines 44-48; and see column 9, lines 6-33).

10. Referring to claim 12, Kitai et al. disclose a transmission apparatus transmitting data received from a user terminal (Client, see Figure 3, #301) through a plurality of networks (see column 6, lines 4-19) to a destination (Server, see Figure 3, #3000), said user terminal executing communication using an Internet protocol (see column 6, lines 28-32), said transmission apparatus comprising: means for storing information relating a destination address (see Figure 1, #180) of the data and addresses of the plurality of networks (Routing Table, see Figure 1, #61a, #61b, #61c); means for stet storing static and dynamic information (see Figure 1, #80-#85, note

that Name of LAN I/F is static and Number of Packets Received is dynamic) about the plurality of networks (Network Information Table, see Figure 1, #73); and means for selecting at least one of the plurality of networks, through which said transmission apparatus transmits the data to the destination, based on said static and dynamic information (Selector, see Abstract; see column 6, lines 20-21, see column 7, lines 44-48, and see column 9, lines 6-33).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai et al. (U.S. Patent No. 5,948,069) in view of Arunachalam et al. (U.S. Patent No. 6,631,122).

13. Referring to claim 4, Kitai et al. differ from claim 4 in that they fail to disclose a monitoring unit monitoring conditions of said plurality of networks, wherein said selection unit changes the service class if said monitoring unit detects a change in the conditions of said plurality of networks. However, changing service class in response to a change of network conditions in an IP network is old and well known in the art. For example, Arunachalam et al. teach just such a method (see column 11, lines 39-61), which has the advantage of enabling the network to provide service to as many users as possible. One skilled in the art would have recognized the advantage of changing the service class in response to a change of network conditions as taught by Arunachalam et al. Therefore, it would have been obvious to a person

with ordinary skill in the art at the time of the invention to incorporate the changing of service class in response to a change of network conditions as taught by Arunachalam et al. into the invention of Kitai et al. to achieve the advantage of enabling the network to provide service to as many users as possible.

14. Referring to claim 5, Arunachalam et al. disclose a rewriting unit rewriting said routing table by referring to said information table if the dynamic information stored in said information table is changed as a result of detection of the change in the conditions of said plurality of networks (see column 11, lines 39-61).

15. Referring to claim 6, Arunachalam et al. disclose that said monitoring unit obtains the dynamic information about said plurality of networks from network information disclosed by said plurality of networks (see column 11, lines 39-61).

16. Referring to claim 7, Arunachalam et al. disclose that said monitoring unit obtains the dynamic information about said plurality of networks by transmitting a packet for collecting network information (see column 11, lines 39-61).

17. Claim 8 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitai et al. in view of Arunachalam et al. as applied to claim 7 above, and further in view of Greuel (U.S. Patent Application Publication No. US 2002/0161861).

18. Referring to claim 8, Kitai et al. in view of Arunachalam et al. differ from claim 8 in that they fail to disclose that said monitoring unit transmits a message packet to the destination for collecting the network information, receives an acknowledgement from the destination in response to the message packet, and obtains communication traffic information about the plurality of networks as the dynamic information about the plurality of networks to the

destination, in an TCP/IP communication. However, the use of TCP/IP messages to perform network monitoring is old and well known in the art. For example, Greuel teaches the use of TCP/IP ICMP messages to perform network monitoring (see paragraph 0006), which have the advantage of utilizing standard elements of TCP/IP to perform network monitoring. One skilled in the art would have recognized the advantage of using TCP/IP ICMP messages for performing network monitoring as taught by Greuel. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of TCP/IP ICMP messages for network monitoring as taught by Greuel into the invention of Kitai et al. in view of Arunachalam et al. to achieve the advantage of utilizing standard TCP/IP elements to perform network monitoring.

Allowable Subject Matter

19. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: Although the prior art does teach the method of implementing QoS in an IP network as shown in claims 1-8 and 10-12, it fails to teach or suggest the use of ICMP timestamp messages for use in performing network monitoring in such a system. There is no teaching in the art to suggest that such a method of performing network monitoring in the system of Applicant would have been obvious to a person with ordinary skill in the art at the time of the invention.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

22. U.S. Patent No. 6,738,387 to Lin et al. teaches a method of routing using the QOSPF protocol, which calculates QoS information for each possible route and stores it in the routing table.

23. U.S. Patent Application Publication US 2001/0007560 to Masuda et al. teaches a method of implementing QoS in a network in which the routing contains information about QoS and is constantly updated based on the status of the network.

24. U.S. Patent No. 5,392,344 to Ash et al. teaches routing and administration of calls of different service classes by storing information about the available network services in a defined menu structure.

25. U.S. Patent No. 6,590,867 to Ash et al. teaches class of service routing in IP networks.

26. U.S. Patent No. 5,477,531 to McKee et al. teaches the use of ICMP Timestamp messages.

27. "TCP/IP Illustrated" by Stevens teaches the use of routing tables in IP networks that contain both static and dynamic information and that are used to make routing decisions about which network to route a packet to.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Molinari whose telephone number is (703) 305-5742. The examiner can normally be reached on Monday-Thursday 8am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJM

Michael Joseph Molinari

DUC HO
PRIMARY EXAMINER

7-9-04